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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,186	09/11/2003	Ronald Scott Beckley	A01477	5800
21898	7590	06/29/2006	EXAMINER	
ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			BERNSHTEYN, MICHAEL	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/660,186

Applicant(s)

BECKLEY ET AL.

Examiner

Michael Bernshteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. This Office Action follows a response filed on April 19, 2006. Applicants have amended claims 1-4, claims 11-20 have been added.
2. In view of the Amendment, claim rejection under 103 has been withdrawn.
3. Claims 1-6 and 11-20 are pending.

### ***Claim Rejections - 35 USC § 102***

4. The test of this section of Title 35, U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 1-6 and 11-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Irie et al. (U.S. Patent 5,959,028).

Irie discloses a resin composition curable through a Michael reaction between (a) a component having a plurality of  $\alpha$ ,  $\beta$ -unsaturated carbonyl groups and (b) a component having a plurality of activated methylene group in the presence of a catalyst is disclosed. The activated methylene component is a polymer of an asymmetric malonate ester in which one of carboxyl groups is esterified with an alkanol while the other carboxyl group is esterified with hydroxyalkyl (meth) acrylate or polyoxyalkylene glycol mono(meth)acrylate (abstract).

With regard to the limitations of claims 1-6 and 11-20, Irie discloses curable resin composition comprising:

- (a) a component containing a plurality of  $\alpha$ , $\beta$ -ethylenically unsaturated carbonyl groups in the molecule;

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b) an acrylate polymer containing a plurality of malonate-terminated pendant groups in the molecule; and

(c) a catalyst capable of promoting the Michael reaction (col. 2, lines 10-15).

Component (a) is a compound or polymer having a plurality of ethylenic unsaturations between carbon atoms at the  $\alpha$  and  $\beta$  positions relative to a carbonyl group. Typical examples of such compound are **acrylic or methacrylic** (hereinafter collectively referred to as "(meth) acrylic") **esters of polyhydric alcohols** such as ethylene glycol di(meth)acrylate, diethylene glycol di(meth) acrylate, propylene glycol di(meth)acrylate, neopentyl glycol di(meth)acrylate, trimethylolpropane tri(meth) acrylate, glycerol tri(meth)acrylate, pentaerythritol tetra(meth)acrylate and the like.

Further examples of component (a) include polyether acrylate resins such as **polyethylene glycol di(meth) acrylate**, etc. (col. 3, lines 30-33).

When component (a) is a resin, its molecular weight ranges between 400 and 100,000, preferably between 600 and 10,000, and the alkenyl equivalent weight ranges between 100 and 10,000, preferably between **100 and 1,000**, which is within the claimed range (col. 3, lines 36-39).

Component (b) may be produced by copolymerizing a malonate-terminated acrylate monomer with a copolymerizable acrylic and/or non-acrylic monomer as exemplified in connection with Component (a) (col. 3, lines 44-47). The malonate-terminated acrylate monomers have the formula, which is substantially identical to formulas in claim 12 (col. 3, lines 52-57).

Examples of copolymerizable acrylic monomers include alkyl (meth)acrylates such as methyl, ethyl, propyl, n-butyl, isobutyl, t-butyl, 2-ethylhexyl or lauryl (meth)acrylate; hydroxyalkyl (meth)acrylates such as 2-hydroxyethyl (meth) acrylate; aryl or aralkyl (meth)acrylates such as phenyl or benzyl (meth)acrylate; and other acrylic monomers such as acrylamide, methylene-bis-acrylamide or acrylonitrile. Examples of copolymerizable non-acrylic monomers include styrene,  $\alpha$ -methylstyrene, itaconic acid, maleic acid, vinyl acetate and the like (col. 4, lines 4-13).

Component (c) of the resin composition of the present invention may be a strong base. Examples thereof include **alkali metal hydroxide** such as sodium hydroxide or potassium hydroxide; **alkal metal alkoxide** such as sodium methoxide or potassium ethoxide; quaternary ammonium hydroxides such as tetrabutylammonium hydroxide, etc. (col. 4, lines 25-30).

The proportions of component (a) and component (b) in the curable resin composition of the present invention generally lie between **2:1 and 1:2**, preferably between 1.5:1 and 1:1.5 relative to the double bond and the activated methylene to be added thereto. The proportion of component (c) may range generally between 0.1 and 10.0 equivalent %, preferably between 0.2 and 5.0 equivalent % based on the sum of component (a) and component (b), which are within the claimed ranges (col. 6, lines 11-18).

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn  
Examiner  
Art Unit 1713

MB  
06/26/2006

  
**DAVID W. WU**  
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